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**REPLY BRIEF**

**WEST/CRS**

**No. 2011-1301**

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**IN THE UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT**

**CLS BANK INTERNATIONAL,**  
*Plaintiff-Appellee,*

and

**CLS SERVICES LTD.,**  
*Counterclaim-Defendant Appellee,*

v.

**ALICE CORPORATION PTY. LTD.,**  
*Defendant-Appellant.*

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Appeal from the United States District Court for the District of Columbia in  
Case No. 07-CV-0974, Judge Rosemary M. Collyer

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**REPLY BRIEF OF DEFENDANT-APPELLANT  
ALICE CORPORATION PTY. LTD.**

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## CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rule 47.4, undersigned counsel for Defendant-Appellant certifies the following:

1. The full name of every party or amicus represented by me is Alice Corporation Pty. Ltd.
2. The name of the real party in interest represented by me is the same.
3. All parent corporations and any publicly held companies that own 10 percent of more of the stock of the party or amicus curiae represented by me are: National Australia Bank Ltd.
4. The following attorneys appeared for Defendant-Appellant in proceedings in the district court or are expected to appear in this Court:
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September 16, 2011

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## INTRODUCTORY STATEMENT

Since *Bilski*, this Court has repeatedly reaffirmed “the broadly permissive nature of [35 U.S.C.] § 101’s subject matter eligibility principles” and that section 101 is “merely a threshold check” that acts as a “coarse eligibility filter.”

*Ultramercial, LLC v. Hulu, LLC*, No. 2010-1544, slip op. at 6 (Fed. Cir. Sept. 15, 2011) (citations omitted). The exception to eligibility for abstract ideas is to be applied narrowly, and then only when the “disqualifying characteristic” of abstractness “exhibit[s] itself so manifestly as to override the broad statutory categories of eligible subject matter.” *Research Corp. Techs. v. Microsoft Corp.*, 627 F.3d 859, 868–69 (Fed. Cir. 2010). Alice’s claims are not close to being abstract.

Alice has claimed (1) computer systems configured to execute exchanges in a particular way that minimizes the risk that one party will perform while the other does not, (2) methods of using computer systems to execute exchanges in this particular way, and (3) computer program products containing software code relating to these computer systems. None of these claims is to the abstract idea of “employing an intermediary to facilitate simultaneous exchange of obligations in order to minimize risk.” JA37. None of these claims is to a basic business concept, like the concept of hedging. None of these claims is to a purely mental process.

Rather, all of these claims relate to a specific, computer-based way, out of many possibilities, to construct a system and process to carry out exchanges. Alice's claims require that a computer maintain electronic accounts for the parties to an exchange that are separate from the parties' real-world accounts. The computer performs the parties' exchange in these separate, or "shadow," accounts if there is sufficient value in each account, and then, sometime thereafter, generates an instruction to make the appropriate adjustments in the parties' real-world accounts. That is one particular way of executing exchanges so as to minimize the risk that only one side will perform. It is not the only way, and Alice's claims do nothing to prevent others from employing other methods of using an intermediary to minimize the risk in an exchange transaction.

Thus, the fundamental premise underlying both the district court's decision, and CLS's brief, is incorrect—Alice does not claim any abstract idea, basic business concept, or mental process. Instead, Alice's "invention invokes computers and applications of computer technology" to perform the steps of a "particular method" for accomplishing a particular end—precisely the type of invention that this Court found not to be "abstract" in *Ulramercial*. *Ulramercial*, slip op. at 10. Indeed, one need look no further than Alice's specification to see that Alice claims a concrete, tangible computer system for carrying out exchanges across electronic accounts.



The district court made another fundamental error. Under *Diamond v. Diehr*, it is improper to “dissect” patent claims into their component parts when determining eligibility under section 101, as the district court did here. 450 U.S. 175, 188 (1981). This Court’s recent decision in *CyberSource Corp. v. Retail Decisions, Inc.*, No. 2009-1358 (Fed. Cir. Aug. 16, 2011), which issued after Alice filed its opening brief, did not, and could not, overrule this basic aspect of the section 101 analysis; rather, it simply recognized that the recording of an otherwise unpatentable method on a functionally defined “medium” does not differentiate the claimed medium from the process recorded on it.

*Diehr* requires courts to consider each claim “as a whole” to determine its eligibility. *Id.* Here, Alice’s computer system claims, as a whole, are directed to machines with express structural limitations—“concrete thing[s], consisting of parts.” *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007). Such a machine is not abstract and is patent-eligible. Additional claim limitations describing what the computer systems are configured to do cannot transform this “concrete thing,” this machine, into an “abstract” principle. CLS’s argument to the contrary notwithstanding, the section 101 patent-eligibility of a claim to a computer does not depend on how the computer is programmed.

The district court and CLS also err in focusing on the “preemptive force” of Alice’s claims, as if section 101 bars a patentee from claiming all practical uses of

the patentee's invention. There is no such freestanding anti-preemption requirement. Rather, section 101 is concerned only with the preemption of so-called "fundamental principles," truly basic ideas or concepts that no one is entitled to monopolize. That concern has no application here, where Alice has not claimed or covered any fundamental principle; to the contrary, Alice has simply claimed a particular way of effecting exchanges using a computer system.

Finally, Alice's methods claims are "tied to a particular machine" because a programmable computer such as Alice's that is configured to carry out particular operations is a "particular" machine under *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994) (en banc). Contrary to CLS's assertions, the computer limitations of Alice's claims impose "meaningful limits" on the claims. CLS argues that under *Gottschalk v. Benson*, 409 U.S. 63 (1972), a claim is not "meaningful[ly] limit[ed]" to a computer unless the claim covers fewer than all computer-based implementations of the method. CLS Br. 32–33. But this is not what *Benson* holds, nor what the "meaningful limits" precedents require. Alice's methods are "meaningfully limited" to a computer because multiple claim limitations require that a computer be used, and the use of a computer is an integral part of what Alice invented and claimed. Thus, Alice's method claims satisfy the "machine-or-transformation" test.

The judgment of the district court should be reversed.

## ARGUMENT

### I. ALICE'S CLAIMS ARE PATENT-ELIGIBLE BECAUSE THEY ARE NOT ABSTRACT.

Since *Bilski*, this Court has repeatedly reaffirmed that patent claims will be held to be “abstract,” and thus unpatentable, only if the “disqualifying characteristic” of abstractness “exhibit[s] itself so manifestly as to override the broad statutory categories of eligible subject matter. *Research Corp. Techs.*, 627 F.3d at 868; *see Ultramercial*, slip op. at 8–9. Patent claims such as Alice’s that are “functional and palpable applications” of underlying ideas, and “specific applications or improvements to technologies in the marketplace are not likely to be . . . abstract.” *Research Corp. Techs.*, 627 F.3d at 868–69; *Classen Immunotherapies, Inc. v. Biogen IDEC*, Nos. 2006-1634, -1649, slip op. at 18 (Fed. Cir. Aug. 31, 2011) (quoting *Research Corp. Techs.*). Alice has not claimed an abstract idea; rather, it has claimed a particular way of minimizing risk in exchange transactions in which “computers and applications of computer technology” perform a “particular method” for carrying out the exchange across a series of electronic accounts. *Ultramercial*, slip op. at 10. Alice’s inventions are therefore not abstract.

#### A. The District Court and CLS Overstate the Breadth of What Alice Has Claimed.

The core premise underlying both the district court’s decision and CLS’s brief is that all of Alice’s claims—whether to methods, computer systems, or

computer storage media—are in effect claims to the same underlying “fundamental business concept.” *E.g.*, CLS Br. 10; *see id.* at 25–30, 41–49; JA51. As discussed in Alice’s opening brief and below, even if this premise were correct, it would not justify the district court’s invalidation of all of Alice’s claims. For example, Alice’s claim to computer hardware components does not become abstract merely because the computer is programmed in a certain way. *See infra* Part II.B. The district court’s premise, moreover, is not correct—there is nothing “basic” or “fundamental” about Alice’s claims.

CLS characterizes Alice’s claims, as did the district court, as covering a basic business concept: “employing an intermediary to facilitate simultaneous exchange of obligations in order to minimize risk,” *e.g.*, CLS Br. 29 (quoting JA37); *see also* JA51, or the concept “of a two-sided ‘escrow,’” *e.g.*, CLS Br. 26. Such concepts, the district court held, are akin to the fundamental economic principle at issue in *Bilski v. Kappos*, which the Supreme Court described as the “concept of hedging risk.” JA37; 130 S. Ct. 3218, 3229 (2010). But both the district court and CLS err because the concepts they identify are not what Alice *actually claims*.

Alice’s claimed invention involves using a computer to carry out an exchange *in a particular way*. In Alice’s invention, a computer system maintains electronic accounts for each party that correspond to, but are independent from,

“real-world” accounts at exchange institutions. *See* Alice Br. 7–8; *e.g.*, JA868 (requiring electronically maintained “first” and “third” accounts, corresponding to “second” and “fourth” accounts at an “exchange institution”). When a transaction is received by the computer system, the computer verifies that there is adequate value in each party’s electronically maintained account; if there is, it adjusts the accounts; and, sometime thereafter, the computer generates an irrevocable instruction to exchange institutions to carry out the transaction in the “real-world” accounts. *Id.* By carrying out the exchange using these two independent sets of accounts, the computer ensures that the “real-world” accounts are only adjusted—and, to take the example of the accused system, foreign currency only changes hands—if the electronic adjustment of the accounts on the computer has been carried out successfully. *Id.*; JA1004–05; *see* JA1007–15.

The use of these two sets of accounts is obviously not the only way to “employ[] an intermediary to facilitate simultaneous exchange of obligations in order to minimize risk.” *E.g.*, JA37. Most simply, for example, two people who wish to exchange something of value—be it jewels, baseball cards, or foreign currency—could each hand their portion of the exchange to a trusted third person sitting between them, and have that person make the exchange when she has both items in hand. That method would use the supposed “concept” underlying Alice’s claims, and Alice’s claims do not remotely cover it. Alternatively, an

intermediary, computer or not, might maintain two actual accounts that directly reflect something of value but do not “shadow” a second, separate set of accounts that are adjusted by an instruction the intermediary generates.

Perhaps because Alice’s claims self-evidently do not cover a concept as basic or expansive as the one the district court identified, CLS narrows the supposed underlying “business concept” when it describes what Alice “effectively preempt[s].” CLS Br. 10 (emphasis omitted) (citing JA40–41, JA51–53, JA56). CLS describes Alice’s invention as “employing an intermediary to facilitate a simultaneous exchange of obligations *if there is adequate value in accounts maintained for the parties.*” *Id.* (emphasis added).<sup>1</sup> Even this narrowed concept is considerably broader than what Alice actually claims. Alice’s claims are only to a particular configuration of accounts and particular series of steps—they do not cover every way for an intermediary to use accounts it maintains for the parties to facilitate an exchange (for example, there could be two actual accounts maintained by the intermediary, rather than Alice’s claimed invention of requiring four accounts in which the actual accounts are not maintained by the intermediary).

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<sup>1</sup> It is only by modifying the district court’s statement of the underlying concept that CLS is able to mischaracterize as “border[ing] on the absurd” Alice’s examples from its opening brief (at 40–41) demonstrating that its claims do not cover the underlying concept the district court actually identified. CLS Br. 52.

Properly understood, Alice's claims are not abstract, and are therefore patent-eligible. This Court's recent decision in *Ultramercial* is directly on point. There, the district court held that claims to a business method for distributing media products over the Internet in exchange for viewing an advertisement was not patent-eligible under section 101. *Ultramercial*, slip op. at 2–4, 14. This Court reversed, holding that the patent “d[id] not simply claim” the abstract idea of using advertising as currency, but instead claimed “a practical application of this idea.” *Id.* at 10. For the reasons discussed above, Alice's claims are directed to such a practical application—a particular sequence of method steps that perform an exchange by using two independent sets of accounts (a pair of real-world accounts and corresponding “shadow” accounts maintained on a computer). *Ultramercial* also emphasized that many of the steps in the method were likely to require “complex computer programming”; the claims, however, contained none of that programming and were deemed patent-eligible. *Id.* at 2–4, 11. Alice's claims likewise require complex computer programming to maintain accounts, electronically adjust those accounts, and generate instructions to exchange institutions. *E.g.*, JA379–80. Alice's various claims are directed to a computer system, to a method of using such a computer system, and to a computer storage medium intended for use with such a computer system. Accordingly, Alice's claims are not abstract.

**B. Alice Does Not Claim a Mental Process.**

CLS also argues that Alice's claims are directed to purely "mental processes"—processes that are unpatentable because they can be performed "entirely in the human mind." *CyberSource*, slip op. at 13. That is incorrect. As *Ulramercial* made clear in discussing *CyberSource*, "[t]he eligibility exclusion for purely mental steps is particularly narrow." *Ulramercial*, slip op. at 13–14. Alice's claims are not "purely mental" because, as the district court assumed and CLS does not dispute, Alice's claims require the use of a computer to perform Alice's particular method steps for effecting an exchange. CLS Br. 5–6; JA24.

Nevertheless, CLS focuses on a purported concession by Alice's expert, Paul Ginsberg, that, in CLS's words, "Alice's claimed methods could be performed without a computer." CLS Br. 10 (quoting JA1012–13). To the contrary, what Mr. Ginsberg actually said is that Alice's method claims "recite methods to be performed on a computer, as opposed to a method that can be performed offline using a pencil and paper or in some other manner without a computer." JA1012 ¶ 39. He then opined that "[i]n an abstract sense, it is possible to perform the business methods of maintaining accounts, adjusting accounts, and providing an instruction without a computer or other hardware," but that the "claimed methods *must* be implemented electronically using some type of computer processor and memory." JA1012–13 ¶¶ 40–41 (emphases added).



The relevant question is whether Alice's methods, *as claimed*, are mental processes—not whether some method that arguably parallels Alice's, but does not require electronic implementation, would be one. For example, in *CyberSource*, this Court found a method to be an “unpatentable mental process” only after examining each step of the method, as claimed, and determining that each claimed step could be performed “in the human mind, or by a human using a pen and paper.” *CyberSource*, slip op. at 12. In other words, because none of the claimed steps precluded an infringement claim against a human who carried out the claimed method in her head or with a pen and paper, the patentee claimed a purely mental process. *Id.* at 12–14 (noting that, for example, “a person could literally infringe step (c) by identifying a likely instance of fraud based on . . . simple observation”). The Court held that “computational methods [within the scope of the claim] which can be performed *entirely* in the human mind are the types of methods” that fall within the abstract idea exception to patent-eligibility. *Id.* at 14 (emphasis in original). By contrast, all of Alice's claims require that the process be performed by a computer; they cannot be infringed by someone carrying out the steps in her head or with a pen and paper.

**C. The Fact that Alice's Computerized Processes Can Be Used in Conjunction with Legal Obligations Does Not Make Them Abstract.**

CLS asserts that Alice's claims merely recite "legal obligations or relationships," and that, as a result, they are abstract under *Bilski*. CLS Br. 29–30. But the Supreme Court did *not* hold in *Bilski* that an otherwise patent-eligible claim, such as Alice's, is unpatentable and abstract if the claimed invention can be used in connection with legal obligations or relationships or to mitigate business risks. To the contrary, the Court expressly rejected the contention that section 101 "categorically excludes business methods," which would be the effect of such a rule. *Bilski*, 130 S. Ct. at 3228; *see also Ultramercial*, slip op. at 7.

Rather, *Bilski* stands for the converse of what CLS argues: that the transformation of legal obligations or relationships does not convert an unpatentable abstract idea into a patent-eligible process under the "transformation" prong of the "machine-or-transformation" test. *See In re Bilski*, 545 F.3d 943, 963–64 (Fed. Cir. 2008) (en banc), *aff'd*, 130 S. Ct. 3218 (2010). But Alice does not argue that its claims are patent-eligible because they transform legal obligations. Rather, Alice's claims are patent-eligible because its particular way of using a computerized intermediary is not abstract, its system claims are directed to *machines*, and its process claims meet the *machine* prong of the machine-or-transformation test.

## **II. ALICE'S COMPUTER SYSTEM CLAIMS ARE DIRECTED TO PATENT-ELIGIBLE "MACHINES."**

### **A. The District Court Improperly Dissected the Claims and Disregarded the Machine Limitations.**

CLS concedes that a computer, such as each system Alice claims in the '720 and '375 patents, "is of course a 'machine.'" CLS Br. 44. But CLS then discounts Alice's machine limitations and argues that its system claims fall within the "abstract idea" exception to patent-eligibility because they are merely "redrafted" method claims. CLS Br. 43–49. CLS's arguments repeat the error of the district court, which invalidated Alice's claims as "abstract ideas" because, it held, "the true 'heart' of Alice's invention . . . is an abstract concept." JA54–55. Although the district court recognized that Alice's claims expressly require, for example, a "data processing system . . . comprising: a communications controller, a data storage unit . . . ; and a computer, coupled to said data storage unit and said communications controller" (JA868, claim 14), the court dismissed these limitations as failing to provide "further exposition or meaningful limitation" to the "incarnation of [an] abstract idea on a computer." JA51.

As Alice explained in its opening brief, the district court's approach is directly contrary to precedent. Alice Br. 25–31. In *Diamond v. Diehr*, the Supreme Court admonished that when considering the validity of patent claims under section 101, "claims must be considered as a whole." 450 U.S. at 188.

Rejecting the view, expressed by the dissent, that the section 101 analysis should focus on the “inventive concept” underlying the patentee’s invention, the Court instead held that “[i]t is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis.” *Id.*; *see id.* at 212 (Stevens, J., dissenting). Thus, CLS’s argument that “Alice did not invent a computer, or any improvement in computer technology,” CLS Br. 48, is irrelevant. Under *Diehr*, it is improper to assess the eligibility of Alice’s system claims by disregarding the “old” computer hardware limitations (as “Alice did not invent a computer”) and then ask whether what is left is abstract. To the contrary, even if Alice’s “underlying” methods were abstract ideas—which they are not, *see supra* Part I—its computer system claims are directed to concrete, patent-eligible machines. *See* Alice Br. 23–25.

CLS attempts to justify the district court’s reliance on the purported “heart” of the invention by citing this Court’s recent *CyberSource* decision. CLS Br. 2, 19, 54. In *CyberSource*, this Court considered a so-called “Beauregard” claim to a “computer readable medium” containing instructions for carrying out a process that the Court had already held to be an unpatentable mental process. *CyberSource*, slip op. at 14–21. Rejecting the patentee’s argument that such a “medium” was by definition a “manufacture,” and thus no longer a mental process,

the Court looked to the “underlying invention” and concluded that the claim should be analyzed “as a process claim.” *Id.* at 16–18.

CLS reads *CyberSource* far too broadly. *CyberSource* did not announce a new mode of analysis in which a court disregards structural limitations in a claim, seeks out the “heart” of an invention, and then determines whether that “heart” is an abstract idea. It could not have done so and adhered to the Supreme Court’s admonition in *Diehr* not to “dissect the claims into old and new elements” in order to assess whether the new elements—the “heart” of the invention—are abstract. 450 U.S. at 188.

*CyberSource* relied heavily on *Parker v. Flook*, 437 U.S. 584 (1978). The claim in *Flook* was drafted as a claim to a mathematical formula—a method of calculating an “alarm limit.” *Id.* at 585–86. As the Supreme Court observed in *Diehr*, the claim also contained two “token” limitations: (1) a “field of use” limitation that the formula was to be used in any one of “numerous . . . processes in the petrochemical and oil refinery industries” and (2) a limitation (deemed “insignificant post-solution activity”) that the “alarm limit” was to be “updated” with the result of the calculation. *Diehr*, 450 U.S. at 191–92 & n.14. Neither of

these limitations was sufficient to confer patent-eligibility on the claim to a mathematical formula. *Flook*, 437 U.S. at 590, 594–96.<sup>2</sup>

The issues presented by the “computer readable medium” claim in *CyberSource* are analogous to the deficiencies identified in *Flook*. Just as the mathematical formula claimed in *Flook* was not rendered patent-eligible by a bare recitation that the formula was to be used in a particular context or the inclusion of insignificant post-solution activity, the claim in *CyberSource* was not made patent-eligible by the bare recitation of a functionally defined repository that records the steps of the method. *CyberSource*, slip op. at 15–16. In neither *Flook* nor *CyberSource* did the claims require that any step of the method actually be carried out by a machine, nor did the claim in either case contain any structural limitation. *See id.* at 15–18 (comparing *CyberSource* claim to “apparatus” claim with no structural limitations in *In re Abele*, 684 F.2d 902, 909 (C.C.P.A. 1982)); *cf. Flook*, 437 U.S. at 596–97. Although the claim in *CyberSource* refers to “one or more processors of a computer system” that may “carry out” the steps of the claimed

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<sup>2</sup> The claim in *Diehr*, like the claim in *Flook*, contained a mathematical algorithm, but in *Diehr*, the Court upheld the claim as patent-eligible because, *as claimed*, it was to a “process for molding rubber articles” that made use of the algorithm, rather than a claim to the algorithm itself. *Diehr*, 450 U.S. at 181, 192–93. Thus, notwithstanding CLS’s repeated quotation of *Flook*’s statement that patent-eligibility does not “depend simply on the draftsman’s art,” *e.g.*, CLS Br. 43 (quoting *Flook*, 437 U.S. at 593), the contrast between *Flook* and *Diehr* illustrates that what limitations a claim actually contains determine its patent-eligibility. *See* Alice Br. 29–31.

process upon “execution of the program instructions” stored on the “medium,” the “processors” are not components of the claimed medium, nor is there any requirement that they actually carry out the method steps.<sup>3</sup> And just as the application in *Flook* did not “contain any disclosure relating to the chemical processes at work,” *Flook*, 437 U.S. at 586, the specification of the *CyberSource* patent contains no disclosure of computer hardware at all, other than a single reference to the fact that the “integrated verification system” is “typically implemented in software for example in a hard disk, floppy disk or other computer-readable medium.” U.S. Patent No. 6,029,154, col. 2, ll. 29–31.<sup>4</sup>

*CyberSource* thus stands for the proposition that when a claimed method is a mental process that need not use a computer or any physical mechanism at all, simply claiming a storage medium that stores software to implement the process does not confer patent-eligibility. Contrary to CLS’s suggestion, *CyberSource* does not announce a general rule that a court can or should simply disregard the

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<sup>3</sup> In light of the Court’s holding that the process at issue in *CyberSource* was a pure mental process, the *CyberSource* computer readable medium claim would be infringed by a printout of code that a human programmer could read and follow, so long as the printout was also “readable” by a computer.

<sup>4</sup> By contrast, Alice’s patents describe its computer system in detail. *E.g.*, JA357; *see, e.g.*, JA253–383.

structural limitations of a machine or manufacture claim and ask only whether the remaining “heart” is abstract, for *Diehr* rejected that approach.<sup>5</sup>

Alice’s system claims are very different from the claims this Court rejected in *CyberSource*. As an initial matter, the “underlying” method steps that Alice’s computer systems are configured to carry out are not mental processes (or another type of abstract idea). See *supra* Part I.B. *CyberSource* thus does not apply. *CyberSource*, slip op. at 16 (relying on the fact that the Court “found claim 3 to be unpatentable because it is drawn to a mental process”).

Even leaving this aside, in contrast to the claims in *CyberSource*, Alice expressly claims structural components that are configured to actually perform the steps of executing parties’ exchanges. Alice’s system claims are drawn to “data processing systems” “comprising” multiple components that are undisputedly concrete pieces of hardware “coupled” together. At a minimum, they join a “computer” and a “data storage unit,” JA708 (’720 claim 68), and some claims involve more components, JA868–69. The claims “as a whole” are drawn to machines that execute an exchange, and must be analyzed as such under *Diehr*. *Diehr*, 450 U.S. at 188. Nothing in *CyberSource* justifies treating Alice’s claims to

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<sup>5</sup> Of course, to the extent *CyberSource* conflicts with *Diehr*, this Court must follow *Diehr*. See, e.g., *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1579 (Fed. Cir. 1989) (when a panel decision is “not reconcilable” with earlier binding precedent, “the panel is obligated to follow the earlier case law”).



computer systems with express hardware components that actually perform the steps of the method as though the claims were to a process with no structural limitations at all.

**B. The Machine Limitations Render Alice's System Claims Patent-Eligible.**

The district court and CLS disregard Alice's machine limitations on the theory that Alice's system claims are nothing more than redrafted unpatentable method claims. Under CLS's view of the law, Alice's machine claims would apparently be patent-eligible if they did not include any limitations at all concerning how the computer should be "configured." Such a claim would simply cover a machine made up of the same structural elements as Alice's systems, and would not include any limitations specifying what the machine is configured to do. Under CLS's approach, this claim would present no section 101 issue because, without any limitations specifying how the machine is configured or what it is to do, the claim could not possibly be viewed as merely a "redrafted" version of an allegedly unpatentable method. Although the claimed invention would not be novel under section 102, it would unquestionably claim patentable subject matter under section 101—a "concrete thing" consisting of expressly claimed structural elements, namely, a patent-eligible "machine." *Nuijten*, 500 F.3d at 1355.

But under CLS's approach, the same computer becomes *less* patent-eligible—or less a "machine"—when it is "configured" to perform certain steps.

And its patent-eligibility *as a machine* differs depending on what steps the hardware is configured to carry out. This is not the law. Alice Br. 31–35. This Court has repeatedly recognized that “a computer operating pursuant to software . . . is apparatus not mathematics.” *Alappat*, 33 F.3d at 1545; *see also In re Warmerdam*, 33 F.3d 1354, 1358, 1360 (Fed. Cir. 1994) (a claim to “a machine having a memory” containing specified data “is for a machine, and is clearly patentable subject matter”); *In re Iwahashi*, 888 F.2d 1370, 1375 (Fed. Cir. 1989) (“The fact that [an] apparatus operates according to an algorithm does not make it nonstatutory.”).

CLS’s argument (and the district court’s ruling) that Alice’s system claims are simply to an abstract idea rest on a premise that this Court, sitting *en banc*, rejected: that a computer, configured to perform particular operations, “may be characterized as an ‘abstract idea’” because it is a general-purpose computing device that is programmed to implement the idea using software. *Alappat*, 33 F.3d at 1544; *see* Alice Br. 31–35. The Court observed that “a general purpose computer *in effect becomes* a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.” *Id.* at 1545 (emphasis added); *see also Ultramercial*, slip op. at 11–12.

Alice’s system claims fit squarely within the holding of *Alappat*. They are drawn to a particular configuration of hardware and software—a “data processing

system” comprising claimed hardware components in which the “computer” element is configured to perform the specific and detailed steps of Alice’s method. As this Court made clear, such a combination is not an “abstract idea”—it is a machine.

CLS asserts that *Alappat* is no longer good law because it relied on the “useful, concrete and tangible result” test that was rejected in *Bilski*. CLS Br. 45; see 130 S. Ct. at 3224–25. But this Court’s recent decisions demonstrate that CLS is wrong. *Ultramercial* expressly applies *Alappat* and reaffirms *Alappat*’s holding that a “general purpose computer in effect becomes a special purpose computer” whether it is configured using hardware or software. *Ultramercial*, slip op. at 11 (quoting *Alappat*, 33 F.3d at 1545). Thus, applications of computer technology like Alice’s are “[f]ar from abstract.” *Id.* at 12. Likewise, this Court’s recent decision in *CyberSource* recognized that *Alappat* is still relevant after *Bilski*. See *CyberSource*, slip op. at 18. CLS’s attempt to avoid *Alappat* is without merit.

CLS also cites this Court’s recent statement that “we have never suggested that simply reciting the use of a computer to execute an algorithm that can be performed entirely in the human mind falls within the *Alappat* rule.” CLS Br. 45 (quoting *CyberSource*). Alice’s system claims do no such thing, and *CyberSource* was not dealing with a claim to a computer system itself, configured to perform particular steps, like the claims in *Alappat* and at issue here. *CyberSource*, slip op.

at 16–18. The “*Alappat* rule” is that claims like Alice’s that are directed to computer systems programmed by software are patent-eligible. *Alappat*, 33 F.3d at 1545. What the passage CLS quotes from *CyberSource* means is that if a claim merely states that an otherwise unpatentable method is to be performed on a computer, that statement alone may not be sufficient to render the method patentable. That observation has no bearing here.

CLS does not dispute that Alice’s claimed system is a “concrete thing, consisting of parts,” *Nuijten*, 500 F.3d at 1355, and the district court acknowledged this as well. JA47–48. But CLS nonetheless contends that Alice has “ignore[d] the principle that the abstract idea exception applies to all categories of patentable subject matter.” CLS Br. 42. To the contrary, Alice expressly acknowledged in its brief that the judicially created exceptions to patent eligibility apply to all four categories of statutory subject matter. Alice Br. 24 (citing *Benson*, 409 U.S. at 67–68). While CLS is correct that machines are not a “protected category,” CLS Br. 44, claims like Alice’s that contain express structural limitations—as opposed to claims to a “machine” or “apparatus” defined in purely functional terms, *cf.* *Abele*, 684 F.2d at 909—do not reflect merely an abstract idea. *Burr v. Duryee*, 68 U.S. (1 Wall.) 531, 570 (1863) (“A machine is not a principle or an idea.”); *see also Nuijten*, 500 F.3d at 1355 (reaffirming *Burr* definition under present-day 35

U.S.C. § 101). Thus, the abstract idea exception is unlikely to apply to structurally defined machine claims, and it certainly does not apply to Alice's claims.

### **III. ALICE'S CLAIMS DO NOT PREEMPT A FUNDAMENTAL PRINCIPLE.**

CLS also argues, and the district court held, that Alice's claims are invalid because they "effectively preempt" an abstract idea. *E.g.*, CLS Br. 17–20; JA40–41. All patent claims "preempt" the inventions they cover because patents confer a right to exclude. The preemption question for purposes of section 101 is a much narrower one. It is only where a claim involves certain basic principles—so-called fundamental principles—that the court must ask whether the claim "preempts" the fundamental principle. If a claim does not involve a fundamental principle, then there is no preemption analysis. Alice Br. 35–41. None of Alice's claims involves a fundamental principle; accordingly, whether they "preempt" all practical uses of Alice's invention is irrelevant to their eligibility under section 101.

Courts have held claims to be invalid because they "effectively preempt" an abstract idea only in rare circumstances, where the claim had the effect of monopolizing every practical use of an idea so fundamental that it should, as a matter of public policy, be "free to all men and reserved exclusively to none."

*Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948) (providing, as examples of unpatentable concepts, natural phenomena "like the heat of the sun, electricity, or the qualities of metals"). Such fundamental principles include

“[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts,” which are “the basic tools of scientific and technological work.” *Benson*, 409 U.S. at 67; *see Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (“Einstein could not patent his celebrated law that  $E=mc^2$ ; nor could Newton have patented the law of gravity.”). *Bilski* added that fundamental economic principles, such as the concept of hedging, are similarly unpatentable. 130 S. Ct. at 3231.

A hallmark of such “fundamental principles” is that they are not limited to a process for accomplishing a particular purpose in a particular way, but rather claim the basic concept itself. *Benson*, 409 U.S. at 64; *Diehr*, 450 U.S. at 192 n.14; *cf. Research Corp. Techs.*, 627 F.3d at 869 (noting that “inventions with specific applications . . . are not likely to be so abstract” as to be ineligible for patent protection); *Ultramercial*, slip op. at 9 (“The application of an abstract idea to a ‘new and useful end’ is the type of invention that the Supreme Court has described as deserving of patent protection.” (quoting *Benson*, 409 U.S. at 67)).

Alice’s claims are directed to a “functional and palpable application[],” *Research Corp. Techs.*, 627 F.3d at 868, not to a fundamental principle. CLS attempts to analogize Alice’s claims to the claims in *Bilski*, which outlined a series of steps that broadly describe the concept of “hedging” risk. CLS Br. 27–28 & n.10. But the *Bilski* claims were not limited to a particular way of carrying out

hedging transactions—as the Supreme Court recognized, they were addressed to the “concept of hedging risk” itself. *Bilski*, 130 S. Ct. at 3223–24, 3229. Alice’s claims, on the other hand, are not to any fundamental principle; rather, they simply claim a particular way of executing exchanges. Accordingly, it does not matter if the only practical way of using Alice’s “underlying” invention (*i.e.*, ignoring Alice’s requirements of machine implementation) is on a computer. The question is not whether Alice’s claims “effectively preempt” all uses of Alice’s invention, but whether Alice’s claims effectively preempt all uses *of a fundamental principle*. Because Alice’s claims do not implicate a fundamental principle, much less preempt all uses of one, they are patent eligible.

#### IV. ALICE’S METHOD CLAIMS SATISFY THE MACHINE-OR-TRANSFORMATION TEST.

CLS argues that Alice’s method claims are not “tied to a particular machine” and thus fail the “machine-or-transformation” test.<sup>6</sup> To the contrary, under *Alappat*, a computer—even one that is not restricted to a particular type of computer hardware—is a “special purpose” machine if it is configured with

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<sup>6</sup> CLS similarly asserts that Alice’s computer systems fail this test. CLS Br. 53–55. But the test is only a “useful” guide to determining whether *process* claims are patent-eligible. *Bilski*, 130 S. Ct. at 3225–26. CLS cites no authority suggesting that the “machine-or-transformation” test is “useful” for determining whether a claim directed to a *machine* is abstract, and the district court did not treat it as such. However, to the extent the test is relevant to Alice’s machine claims, the arguments in this section apply equally to them.

software to perform the steps of a particular method; it is thus a “particular” machine. 33 F.3d at 1545. The Court in *Alappat* concluded that there is no reason why a machine that has been configured using software should be any different, for purposes of patent eligibility, from a machine configured using wires. *Id.* As this Court reiterated in *Ultramercial*, a programmed computer is a “particular machine.” *Ultramercial*, slip op. at 11–12 (“[A] programmed computer contains circuitry unique to that computer.”); see Alice Br. 42–45; see also *id.* at 31–35 (discussing *Alappat*). Alice’s computer-based methods are thus tied to a particular machine.

CLS asserts that “[t]o be tied to a ‘particular’ machine or apparatus, the machine or apparatus ‘must impose meaningful limits on the claim’s scope.’” CLS Br. 32 (quoting *Bilski*, 545 F.3d at 961). CLS then argues a claim limitation requiring the use of a computer does not impart such “meaningful limits” unless it is “limited to a specific type of computer, a specific computer program or subroutine, or any other improvement in computer technology.” *Id.* at 33. There is no such requirement. Indeed, in *Ultramercial*, this Court found the process claim implemented on a computer to be patent-eligible even though it did not specify any specific type of computer, specific program or subroutine, and contained no improvement in computer technology itself. *Ultramercial*, slip op. at 2–4, 10–11.



The test to determine whether a machine imposes a “meaningful limit” was articulated by this Court in *SiRF*: a machine limitation is “meaningful” if the machine “play[s] a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly.” *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010)). Alice’s claimed methods meet this test. The computer “play[s] a significant part” in Alice’s method because the computer itself is the intermediary between the two parties that is central to the method. One set of accounts is “maintained” and “electronically adjusted” *by the computer*. JA1011–15 ¶¶ 36, 38–39, 41–42, 44–45. Unlike computer limitations that courts have rejected as not “meaningful,” the use of a computer is not limited to “insignificant extra-solution activity,” *i.e.*, a pre- or post-solution recording or data acquisition step. Alice Br. 45–46. Alice claims methods of executing exchanges, and the method step that “effect[s] the exchange” is—and must be—performed “electronically” by the computer. *E.g.*, JA548 (claim 68).

CLS attempts to mischaracterize Alice’s claims as claims that, as this Court put it in *SiRF*, “function *solely* as an obvious mechanism for permitting a solution to be achieved more quickly.” *SiRF*, 601 F.3d at 1333 (emphasis added). CLS thus asserts that Alice’s expert testified that the claimed methods would be performed by a computer “since that would be faster and more efficient.” CLS

Br. 10. What Mr. Ginsberg actually testified leads to the opposite conclusion:

“The difference between [Alice’s claimed methods] and an abstract business method is *not just* that the methods can be performed faster using a computer than an exchange of obligations could be performed off-line; rather, the particular methods claimed in these patents only work, as intended, when carried out using a computer.” JA1013 ¶ 41 (emphasis added). The use of a computer is “integral” to Alice’s claims and imposes a “meaningful limit” under *SiRF*. 601 F.3d at 1332.

CLS argues that under *Benson*, a claim limitation requiring the use of a computer does not impose a “meaningful limit” on a claim unless the claim, as limited, does not cover all computer-based implementations of the method, and that Alice’s argument to the contrary “is flatly inconsistent with *Benson*.” CLS Br. 32–33, 35. CLS’s view is directly contrary to this Court’s holding in *Ultramercial*. It also ignores what was actually at issue in *Benson*. *Benson* was about fundamental principles: the patentee in *Benson* claimed a basic numerical relationship that was fundamental to how computers work, but also had “no substantial practical application except in connection with a digital computer,” 409 U.S. at 64, 71–72. The Court found that even if the mathematical algorithm were implemented on a computer, the claim would still in effect be to the algorithm itself since the only use of the algorithm was a part of the functioning of a computer. *Benson* says nothing about when a process claim that must be

performed using a computer, but which is not fundamental to the working of a computer itself, is “meaningfully limited.”

*CyberSource* also does not support CLS’s position that Alice’s claims are unpatentable. See CLS Br. 34–35. CLS argues that under *CyberSource*, it is insufficient for a method claim to “simply recit[e],” for example in a claim preamble, that “an algorithm that can be performed entirely in the human mind” is to be carried out on a computer. *CyberSource*, slip op. at 18. Alice’s claims do not involve “an algorithm that can be performed entirely in the human mind” and do not “simply recite” that the method is to be carried out by a computer. Rather, the claims include specific method steps that must be carried out electronically, and the claimed methods, as a whole, “only work, as intended, when carried out using a computer.” JA1013 ¶ 41.

Accordingly, Alice’s claimed methods are “tied to a particular machine,” and the use of a computer imposes a “meaningful limit” on the claims.

### CONCLUSION

For the foregoing reasons, the judgment of the district court should be reversed, and the case remanded for further proceedings.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Adam L. Perlman", written over a horizontal line.

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September 16, 2011

## CERTIFICATE OF SERVICE

I, David M. Krinsky, counsel for appellant and a member of the Bar of this Court, certify that, on September 16, 2011, the attached Reply Brief of Defendant-Appellant Alice Corporation Pty. Ltd. was hand-delivered to the Clerk and two copies were dispatched by first-class U.S. Mail to the following:

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I further certify that all parties required to be served have been served.



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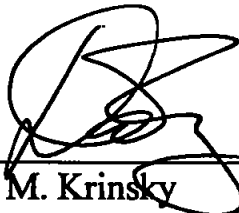
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1. This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B). The brief contains 6,920 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii) and Federal Circuit Rule 32(b).

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September 16, 2011